



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/830,044	04/23/2004	Yasuhiro Ogata	Q80791	8714
23373	7590	10/16/2008	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			SHEWAREGED, BETHELHEM	
ART UNIT	PAPER NUMBER			
			1794	
MAIL DATE	DELIVERY MODE			
10/16/2008			PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/830,044	<b>Applicant(s)</b> OGATA ET AL.
	<b>Examiner</b> Betelhem Shewareged	<b>Art Unit</b> 1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on **24 July 2008**.  
 2a) This action is **FINAL**.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) **1-3,5,6 and 8-27** is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) **1-3,5,6 and 8-27** is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-146/08)  
 Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

**DETAILED ACTION**

1. Applicant's response filed on 07/24/2008 has been fully considered. Claim 1 is amended, claims 4 and 7 are canceled, and claims 1-3, 5, 6 and 8-27 are pending.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-3, 5, 6 and 8-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Majumdar et al. (US 6,475,696 B2) in further view of Ohbayashi et al. (US 6,492,005 B1) and Serizawa et al. (US 2002/0058589 A1).

4. Majumdar discloses an imaging member comprising an image layer and a support (abstract). The support comprises a paper sheet and a layer (also referred as "nanocomposite material"), wherein the layer comprises an inorganic particle such as mica having the claimed aspect ratio, and a resin such as polyvinyl alcohol. The layer further comprises optional components such as titanium oxide, zinc oxide, talc, calcium carbonate, zinc stearate and fatty amides. The layer may be applied on both sides of the support. (See col. 3, line 65 thru col. 4, line 52; col. 7, line 19 thru col. 8, line 26; col. 11, lines 1-11 and 64; and claims 1, 12 and 19). Majumdar does not disclose image layer as claimed. However, Ohbayashi teaches a recording sheet comprising a support and an ink absorptive layer (abstract). The ink absorptive layer comprises a resin such

as polyvinyl alcohol, gelatin and cellulose and a hardener such as boron compound (col. 13, line 61 and col. 15, line 52). Majumdar and Ohbayashi are analogous art because they are from the same field of endeavor that is the recording sheet art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the ink absorptive layer of Ohbayashi with the invention of Majumdar so as to provide a recording sheet having enhanced image quality, drying property and water resistance property.

5. In Majumdar, the layer between the support and the image layer does not comprise water swellable synthetic mica as claimed. However, Serizawa teaches a recording material comprising a support, a resin layer on the support and a recording layer on the resin layer (abstract). The resin layer comprises a binder such as gelatin and polyvinyl alcohol, and water swellable synthetic mica having an aspect ratio of 100 or more ([0022], [0043] and [0061]-[0065]). Majumdar and Serizawa are analogous art because they are from the same field of endeavor that is the recording medium art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the resin layer of Serizawa with the invention of Majumdar in order to prevent printed image defects (see [0024] of Serizawa).

#### ***Response to Arguments***

6. Applicant's argument is based on that the primary reference and the declarations filed on 08/21/2006 and 11/21/2006 support the unexpected superior properties of the present application over the teaching of the primary reference (see page 7 of

Art Unit: 1794

Applicant's Remarks). This argument is not persuasive for the following reason. The Examiner carefully reviewed both of the declarations filed on 08/21/2006 and 11/21/2006. The current rejection is not based on only the teaching of Majumdar, it is based on the combined teaching of Majumdar and Serizawa. Serizawa is combined with Majumdar to teach the claimed water swellable synthetic mica having aspect ratio of 100 or more. Both declarations show that smectite clay is distinct from water swellable synthetic mica. However, Serizawa expressly teaches the claimed water swellable synthetic mica.

7. Applicant further argued that Serizawa discloses that the resin layer containing the water swellable synthetic mica is between the recording layer and the support, and that the reference does not disclose the resin layer can be used as a backcoat layer (see page 7 of Applicant's remark). This argument is not persuasive for the following reason. The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case, the resin layer of Serizawa is provided between the support and the recording layer (abstract and [0023]), wherein the resin layer comprises water swellable synthetic mica having an aspect ratio of 100 or more ([0061]-[0065]). The resin layer of Serizawa is combined with the invention of Majumdar. Majumdar expressly teaches applying the layer containing mica to be applied on both

sides of the substrate. Thus the combination of Serizawa and Majumdar teach the claimed backcoat layer and the claimed undercoat layer. Furthermore, Serizawa does not expressly exclude applying the resin layer as a backcoat layer. In fact, Serizawa teaches the recording layer can be coated by a dip coating method [0177], and the resin layer is provided between the support and the recording layer [0023]. When the dip coating method is used to coat the recording layer, the recording layer must be applied on both sides of the support. Thus since the resin layer is provided between the support and the recording layer, it would be impossible to conclude that the resin layer of Serizawa cannot be used as backcoat layer as argued by the Applicant.

8. Applicant argued that it would not have been obvious to one having ordinary skill in the art to implement the resin layer disclosed in Serizawa as material for a backcoat layer in Majumdar (see page 10 of Applicant's Remarks). This argument is not persuasive for the following reason. The resin layer of Serizawa is provided between the support and the recording layer (abstract and [0023]), wherein the resin layer comprises water swellable synthetic mica having an aspect ratio of 100 or more ([0061]-[0065]). The resin layer of Serizawa is combined with the invention of Majumdar. Majumdar expressly teaches applying the layer containing mica to be applied on both sides of the substrate. Thus the combination of Serizawa and Majumdar teach the claimed backcoat layer and the claimed undercoat layer. Furthermore, Serizawa does not expressly exclude applying the resin layer as a backcoat layer. In fact, Serizawa teaches the recording layer can be coated by a dip coating method [0177], and the resin layer is provided between the support and the recording layer [0023]. When the dip

Art Unit: 1794

coating method is used to coat the recording layer, the recording layer must be applied on both sides of the support. Thus since the resin layer is provided between the support and the recording layer, it would be impossible to conclude that the resin layer of Serizawa cannot be used as backcoat layer as argued by the Applicant.

9. Applicant argued that one having ordinary skill in the art would not have been motivated to combine Serizawa with Majumdar, as the two references relate to two different technical fields. In this regard, Majumdar relates to the technical field of inkjet printing versus Serizawa, which relates to the technical field of heat-sensitive or pressure-sensitive recording (see page 10 of Applicant's Remarks). This argument is not persuasive for the following reason. The imaging element of Majumdar is not limited to the use of an ink jet imaging member only. The imaging member of Majumdar includes thermal transfer and xerographic imaging (see col. 3, lines 54-57), which include the use of heat and/or pressure.

10. Applicant argued that the declarations submitted on August 21, 2006 and November 21, 2006, are relevant to the present rejection, and support patentability of the presently claimed invention. Applicants respectfully request that the Office reconsider the declarations as evidence in support of nonobviousness, and demonstrate the unexpected superior properties of the presently claimed invention over the disclosure of the primary reference, Majumdar (see page 10 of Applicant's Remarks). This argument is not persuasive for the following reason. The current rejection is not based on only the teaching of Majumdar, it is based on the combined teaching of Majumdar and Serizawa. Serizawa is combined with Majumdar to teach the claimed

Art Unit: 1794

water swellable synthetic mica having aspect ratio of 100 or more. Both declarations show that smectite clay is distinct from water swellable synthetic mica. However, Serizawa expressly teaches the claimed water swellable synthetic mica.

11. For the above reasons claims 1-3, 5, 6 and 8-27 stand rejected.

***Conclusion***

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

13. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betelhem Shewareged whose telephone number is (571)272-1529. The examiner can normally be reached on Monday-Friday 9am-5pm.

Art Unit: 1794

15. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

16. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BS

October 10, 2008.

/Betelhem Shewareged/  
Primary Examiner, Art Unit 1794.